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EXAMINER	
HSU, AMY R	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/715,710	NONAKA, OSAMU	
	Examiner	Art Unit	
	Amy Hsu	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/17/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/18/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2,5-7,25-28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakata et al. (US 6,987,538).

Regarding Claim 1, Nakata teaches a focusing apparatus comprising: a distance-measuring device which measures distances of a plurality of points in a photographing field (*Fig 14 reference number S503 describes a step of measuring distance at a plurality of points which correspond to sensors A-C and Col 6 Lines 61-67 describe the multifocus detection sensor unit which acts as a distance measuring device*); a photographing lens (*Fig. 1 reference number 51 and Col 7 Line 57*); a driving mechanism which drives the photographing lens along an optical axis (*Col 7 Lines 18-25 and 57-59*); an image pickup device which receives a subject light flux incident via the photographing lens to output a subject image signal (*Col 1 Lines 18-19 and 33-34*); and a CPU which controls the driving mechanism to drive the photographing lens along the optical axis (*Col 7 Lines 18 and 57-59)*, while detecting a contrast of the subject image signal in a plurality of image pickup areas corresponding to the plurality of points (*Nakata describes a detailed method of obtaining contrast using information from more*

than one point starting in Col 20 Lines 7-9) and which adjusts a focal position of the photographing lens in a position which has a highest contrast of the subject image signal (*Col 7 Lines 24-25 describe the focus of the lens being adjusted and Fig 13 describes a process of calculating the optimal position for the lens which inherently must have the highest contrast to be optimal*) in an image pickup area corresponding to a point indicating a shortest distance of an output of the distance-measuring device in the plurality of points (*Nakata also teaches the feature of selecting data representing the closest distance in Col 3 Lines 45-48).*

Regarding Claim 2, Nakata teaches the apparatus according to claim 1, wherein the distance-measuring device detects a brightness in the plurality of points (*Col 8 Lines 36-40 describe the multifocus detection sensor, which measures distance, and its ability to detect brightness by having light receiving means. The multiple sensors inherently detect at a plurality of points)*, and the image pickup device sets an integration time in the plurality of image pickup areas based on the detected brightness (*Col 9 Lines 58-63 teaches that the integration time is in accordance with the brightness of the object).*

Regarding claim 5, Nakata teaches a focusing apparatus comprising: an image pickup device including a plurality of image pickup areas (*Col 7 Lines 4-7 and Fig. 1 number 21 teach a CCD, or image pickup device which has different sensor units, or multiple pickup areas*); a focusing lens including an optical path via which a subject light flux is incident upon the image pickup device (*Col 8 Lines 21-24*); a focusing section which determines a plurality of focusing lens positions from a relation between

the position of the focusing lens and a contrast of a subject image signal obtained on the image pickup device via the focusing lens (*Col 7 Lines 4-25 describe a focusing section which determines the lens position. Col 15 number 521 is a step that takes contrast into account for focusing*) ; a distance-measuring section which obtains the position of a subject in a photographing field and a distance to the subject by the subject light flux incident via an optical path different from that of the focusing lens (*Col 6 Lines 61-67 through Col 7 Lines 1-3. The optical path of the focusing lens is illustrated in Fig. 1 from reference number 53 to 14, which is different from the light flux to the distance measuring device which is reference number 15 to 21)*); and a calculation control section which obtains a plurality of combinations of the focusing lens position and the image pickup area for use at the time of the focusing by the position and distance of the subject obtained by the distance-measuring section (*Col 20 Lines 56-59 teaches that the object distance and position, which is obtained by the distance measuring section, is used for focusing and this information is used to obtain focusing lens positions as described in Col 7 Lines 24-25*)

Regarding Claim 6, Nakata teaches the apparatus according to claim 5, further comprising: a control section which stops the focusing lens in the plurality of focusing lens positions in accordance with the plurality of combinations (*Fig.1 number 61 is the lens CPU which controls, including stopping, the focusing lens.*) and which obtains the contrast of the subject image signal outputted from the image pickup area of the combination corresponding to each focusing lens position and the contrast of the subject image signal outputted from the image pickup device in all the areas of the

image pickup device to determine the position of the focusing lens (*Col 7 Lines 64-67 through Col 8 Lines 1-5 describe how information from the lens CPU is supplied to the peripheral control circuit, which determines lens position data The data supplied from the lens CPU could include contrast and focusing lens position data*).

Regarding Claim 7, Nakata teaches the apparatus according to claim 5, wherein the distance-measuring section includes a divided sensor array (*Fig. 2 number 212A-C and Col 8 Lines 36-40*), and determines charge accumulation conditions of the image pickup device at the time of the obtaining of a change in the contrast by the output of the sensor array disposed in the distance-measuring section (*Starting in Col 8 Line 51, Nakata teaches the distance measuring section, or Fig. 1 number 21 which is where sensors 212A-C are disposed, being capable of determining charge accumulation conditions such as memory*).

Regarding Claim 25, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens including a diaphragm mechanism; an image pickup section which includes an image pickup device to photograph a subject image incident via the photographing lens to obtain a subject image signal (*previously addressed*); a setting section which sets conditions of an image pickup operation by the image pickup section (*Col 1 Lines 30-39 describe a setting section which sets conditions of the CCD such as amplification rate of the output voltage*); a first auto-focus section which focuses the photographing lens from a contrast of the subject image signal obtained by the image pickup section; a pair of optical systems for distance measurement which are different from the photographing lens; a distance-measuring section which

includes a pair of sensors for distance measurement to acquire a pair of subject image signals via the pair of optical systems for distance measurement and which performs a distance-measuring operation to calculate a subject distance from the pair of subject image signals; a second auto-focus section which focuses the photographing lens based on the distance measurement result of the distance-measuring section (previously addressed); a selecting section which detects the subject image signal obtained by the image pickup device or a brightness distribution of the pair of subject image signals obtained by the sensors for distance measurement to select either one of the first and second auto-focus sections in accordance with a ratio of a low-brightness portion in the detected brightness distribution (*Fig. 13 shows the process of inputting the object distance that was measured and Col 20 Lines 7-44 describes the process of obtaining the defocus information in a low contrast situation mentioned in Line 2*); and a change section which changes the conditions of the distance-measuring operation set by the setting section, when the selecting section selects the second auto-focus section (*As a result of the above mentioned process, the distance measuring operation selections are altered such as which sensor is selected in Col Line 46*).

Regarding Claim 26, Nakata teaches the camera according to claim 25, wherein the conditions of the image pickup operation set by the setting section include at least aperture value information of the diaphragm mechanism, shutter speed information of a shutter to expose an image pickup plane of the image pickup device, and sensitivity information of the image pickup device (Col 7 Lines 64-67 through Col 8 Lines 1-11).

Regarding Claim 27, Nakata teaches the camera according to claim 26, wherein the change section changes the aperture value information and the sensitivity information set by the setting section (Col 7 Lines 64-67 through Col 8 Lines 1-11).

Regarding Claim 28, Nakata teaches the camera according to claim 27, wherein the change section the aperture value information so as to narrow down the diaphragm mechanism by a value larger than that in the aperture value information set by the setting section and changes the sensitivity of the image pickup device so as to raise the sensitivity of the image pickup device (Col 7 Lines 64-67 through Col 8 Lines 1-11).

Regarding Claim 30, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens; an optical system which is different from the photographing lens; a distance-measuring section which acquires a plurality of subject image signals via the optical system different from the photographing lens prior to a photographing operation to obtain a distance of a main subject based on the acquired plurality of subject image signals (*previously addressed*); and a judging section to judge a scene in which sensitized photographing is possible by a brightness change in the plurality of subject image signals acquired by the distance-measuring section (*a judging apparatus for judging the contrast of the detected object is taught in the abstract Line 7-8*), the judging section controlling focusing of the photographing lens in accordance with the distance of the main subject obtained by the distance-measuring section (*Col 20 starting on Line 7 describes a judging section and how focus is controlled as a result*) and changing a diaphragm of the photographing lens and a sensitization sensitivity at the time of the photographing, when judging the scene in

which the sensitized photographing is possible (*Col 8 Lines 1-10 describe changing the diaphragm*).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakata et al. (US 6987538), and further in view of Watanabe et al. (US 7184090).

Regarding Claim 3, Nakata teaches a focusing apparatus comprising: a distance-measuring device which measures distances of a plurality of points in a photographing field (*Col 2 Lines 56-59*); a photographing lens (*Fig.1 number 51*); a driving mechanism which drives the photographing lens along an optical axis (*Col 7 Lines 18-25, 57-59*); an image pickup device which receives a subject light flux incident via the photographing lens to output a subject image signal (*Col 1 Lines 18-19, 33-34*) ; an image processing section which processes the subject image signal outputted from the image pickup device (*Col 1 Lines 24-28*); and a CPU which selects the specific area based on a part of an output of the distance-measuring device (*Col 7 Lines 4-7 teach the CPU which calculates defocus in accordance with data from different detection zones, or specific areas, and thereby must select the specific areas, which is supplied from the multifocus detection sensor unit, or distance-measuring device*) and which operates the driving mechanism to execute an AF operation in accordance with a

contrast of the subject image signal in a specific area (*Col 7 Lines 11-13, 24-25 teach the driving mechanism to move the lens as a consequence of adjusting the AF motor, which executes an AF operation. This AF operation is performed in accordance with a contrast in a specific area. Fig. 15 describes the different sensors representing different areas and contrast measurement done in those areas)*. However, Nakata fails to teach the AF operation specifically as a mountain climbing AF operation. Watanabe teaches the mountain climbing AF operation (Fig. 20). It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the AF operation in Nakata by specifically using the mountain climbing AF operation because it is an effective operation to set the most optimal focus on the subject at all times.

Regarding claim 4, Nakata teaches the apparatus according to claim 3, wherein the CPU selects the specific area based on the output of the distance-measuring device excluding an output indicating a longest distance (*Col 3 Lines 40-41 teach a selecting device inherently controlled by the CPU which selects the focus data or area based on information from the detecting device, or distance measuring device*. Col 3 Lines 53-55 and Col 20 Lines 39-42 teach the exclusion of the longest distance by means of selecting the closest or shortest object distance).

Regarding Claim 8, Nakata teaches a focusing apparatus comprising: a photographing lens (*Fig. 1 number 53*); an image pickup section which detects a subject image incident via the photographing lens (*Col 1 Lines 18-19, 33-34*); an optical system which is different from the photographing lens (*In Fig. 1 the photographing lens is number 53 while the optical system includes numbers 13,14, and*

21 rendering the optical system different from the photographing lens); a distance-measuring section which uses the optical system different from the photographing lens to measure a subject distance of a plurality of points in a photographing field (*Starting on Col 6 Line 61, Nakata describes the distance measuring section, or Fig. 1 number 21, which uses the optical system including reference numbers 212A-C different from the lens. The multifocus detection sensor unit measures a subject distance at a plurality of points which correspond to a plurality of sensors as depicted by reference numbers 212A-C*); and a determining section which focuses the photographing lens on a plurality of focal positions corresponding to a plurality of distance measurement results of the distance-measuring section (*Col 7 Lines 4-7, 24-25, 57-59*) and which determines an area to execute an AF based on contrasts obtained at the plurality of focal positions and the distance measurement results (*Col 20 Lines 7-15 describes the determining area is based on contrast and distance measurement results*).

5. Claims 9-24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakata (US 6987538) and further in view of Morimoto (US 6806905).

Regarding Claims 9 and 24, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens (*Fig.1 number 51*); a driving circuit which drives the photographing lens along an optical axis direction (*Col 7 Lines 57-59*); an image pickup device which receives a light flux incident from the subject via the photographing lens to output a subject image signal (*Col 1 Lines 18-19, 33-34)*; an image processing circuit which processes the subject image signal outputted from the

image pickup device (*Col 1 Lines 24-28)*; a distance-measuring device which includes a pair of optical systems and a pair of sensors for distance measurement to detect a plurality of subject images incident via the pair of optical systems (*Fig. 2 and Col 6 Lines 61-67 through Col 7 Lines 1-3*) and which outputs information associated with a subject distance based on the plurality of subject images detected by the sensors for distance measurement (*Col 7 Lines 4-7*) and which detects the plurality of subject images in a case where the subject has a low brightness (Col 20 Lines 7-10 describes the case of low contrast or brightness); and a CPU which selectively executes a first auto-focus operation of detecting a contrast state based on the subject image signal processed by the image processing circuit to adjust a focus of the photographing lens (*Fig 15 number 521 and Col 22 Lines 65-67 describes the apparatus detecting a contrast state based on the image signal which affects the focus of the lens*). Nakata also teaches an auto-focus operation of performing a distance-measuring operation by the distance-measuring device for distance measurement to adjust the focus of the photographing lens in accordance with a result of the distance measuring operation (*Col 7 Lines 4-7, 24-25, 57-59).* Nakata fails to teach the auto focus operation of performing distance measurement specifically in an irradiation versus non-irradiation state of auxiliary light. More specifically, Nakata fails to teach an irradiation device, which selectively switches irradiation and non-irradiation of a subject with an auxiliary light for distance measurement. Morimoto teaches an irradiation device (Fig 3 number 5) which inherently switches irradiation and non-irradiation of a subject with an auxiliary light. It would have been obvious at the time the invention was made to one of ordinary

skill in the art to modify the apparatus taught by Nakata by adding an irradiation device such as a flash for the purpose of supplying auxiliary light to the subject during distance measurement.

Regarding Claim 10, Nakata teaches the camera according to claim 9, wherein the CPU judges whether or not the subject indicates the low brightness and executes any of the first, second, and third auto-focus operations in accordance with the result of the judgment (*Col 20 Lines 7-15 describe the camera in low brightness or contrast situation, a judging device to judge the low brightness condition, and goes on to describe the auto focus result in accordance with Claim 9*).

Regarding Claim 11, Nakata teaches the camera according to claim 10, wherein the CPU executes the second auto-focus operation and judges that the subject indicates the low brightness (*Col 20 Lines 7-10*), when the output of the sensors for distance measurement indicate a level not more than a predetermined level as a result of the second auto-focus operation (*Col 20 Lines 35-36*).

Regarding Claim 12, Nakata teaches the camera according to claim 11, wherein the CPU executes the third auto-focus operation, when the subject is judged to indicate the low brightness (*Col 20 Lines 7-10 describe low contrast or brightness being judged.*) It would have been obvious at the time the invention was made to one of ordinary skill in the art to combine the low contrast being judged as taught in Nakata and modify this feature to take place after the CPU executes an auto focus operation under which the subject is under an irradiation state of auxiliary light, or when the flash is turned on.

Regarding Claim 13, Nakata teaches the camera according to claim 9, wherein the CPU executes the second auto-focus operation, and executes the first auto-focus operation, when the subject is judged to exist in a distance shorter than a predetermined distance. Col 20 Lines 15-45 describe the system, which judges the distance and relates the concept of a comparing against a predetermined value in Line 35. Starting in Col 20 Line 46 the auto focus operation is described. The focus operation takes into account contrast (Col 20 Lines 7-9), which teaches the first auto-focus operation. It would have been obvious at the time the invention was made to one of ordinary skill in the art to perform the auto focus operation specifically under a non-irradiation state or with a flash turned off.

Regarding Claim 14, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens (*Fig 1 number 51*); a first auto-focus section which adjusts a focus of the photographing lens based on a contrast of a subject image obtained via the photographing lens (*Fig 15 number 521 and Col 22 Lines 65-67 take contrast into account for focus*); a pair of optical systems which are different from the photographing lens (*Fig. 1 number 53 depicts the photographing lens and the optical systems include reference numbers 15 and 21, which are different than the lens*); a second auto-focus section which adjusts the focus of the photographing lens based on a pair of subject images obtained via the pair of optical systems (*Col 6 Lines 61-67 through Col 7 Lines 1-3)*; Nakata fails to teach a flash light irradiating section which irradiates a subject with a flash light, which is addressed in the paragraph regarding Claim 9. Nakata teaches a judging system in Col 20 Lines 7-15. It would have been

obvious at the time the invention was made to one of ordinary skill in the art to specifically incorporate the judging system with a control section to operate either the first or second auto focus operation based on the judging system data because having a control section to select the appropriate auto focus method based on information from the judging system would optimize the auto focus operation under various conditions.

Regarding Claim 15, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens (*Fig. 1 number 53*); an image pickup device which acquires an image signal of a subject in a photographing field via the photographing lens at the time of photographing (*This is depicted by the dotted line path in Fig. 1 from number 53 to number 21*); an optical system which is different from the photographing lens (*Fig.1 number 53, the photographing lens, is different than the optical system in Fig. 1 including reference number 14*); a distance-measuring section which uses the optical system different from the photographing lens to acquire a plurality of image signals and which obtains a distance of a main subject based on the acquired plurality of image signals prior to the photographing (*Col 6 Lines 61-67 through Col 7 Lines 1-3*); a control section which controls a focus of the photographing lens in accordance with the distance of the main subject obtained by the distance-measuring section (*Col 7 Lines 4-7, 24-25*) and which determines whether or not to continuously control the focus by a contrast change of the image signal outputted from the image pickup device with a focal position movement of the photographing lens (*Col 15 Lines 51-55 describe a flag that is set to determine whether to continue to change the focus or stop*).

Nakata fails to teach a projecting section which emits a light to the main subject in a case where the plurality of image signals acquired by the distance-measuring section are inappropriate for an operation of obtaining the main subject distance by the distance-measuring section. Morimoto teaches a projecting sections which emits light (Fig.3 number 5). It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the teachings in Nakata with a commonly known feature such as a flash device.

Regarding Claims 16, 21, and 22, Nakata teaches a photographing lens (*Fig. 1 number 53*), an image pickup device which acquires a subject image signal via the photographing lens (*Fig. 1 depicts number 21, the image pickup device which obtains its images from number 53, the photographing lens*), a first auto focusing control section which detects contrast of a subject image acquired by the image pickup device (*Fig. 15 number 521 and Col 22 Lines 65-67 describe the step in which contrast is detected and Col 3 Lines 49-59 describe how the contrast is used in focusing*), an optical system for distance measurement (Fig. 1 number 21 and Fig. 2 showing more than 2 sensor systems) different than the photographing lens (Fig. 1 number 53), a distance measuring section which obtains a subject distance based on the plurality of subject image signals acquired from the optical system (Col 6 Lines 61-67 through Col 7 Lines 1-3), a second focusing section which controls focus based on distance measuring section (Fig. 14 number S401 and Col 24 Lines 54-57 shows where the apparatus takes in the distance measurement to perform focus), a determining section which determines whether to control the focusing by the contrast or the distance

measurement (the process is outlined in Fig. 13), a judging system (this is described in the abstract Line 7-8 and Col 20 Lines 7-15). Nakata fails to teach a flash light, which irradiates a subject with a flash, or a projecting section, which projects a light. It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the teachings in Nakata with a commonly known feature such as a flash device. Regarding Claim 22, where the photographing lens is displaced by a micro amount, although "micro" amount is not specifically mentioned in Nakata, it is commonly known in the art that the displacement of the photographing lens and other moving parts of modern digital cameras is done on the scale of micrometers. Therefore it would be obvious that the displacement of the lens would be on the scale of micrometers.

Regarding claim 17, Nakata does not teach the camera according to claim 16, wherein the projecting section is a flash light irradiating section, which irradiates the subject with a flash light. Morimoto teaches a flash light (Fig. 3 number 5). It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the teachings in Nakata with a commonly known feature such as a flash device.

Regarding claim 18, Nakata teaches the control according to claim 16, wherein the distance-measuring section acquires a pair of subject image signals via the optical system for distance measurement and obtains the subject distance from a phase difference between the pair of subject image signals (*Col 6 Lines 61-67*).

Regarding Claims 19, Nakata teaches the camera according to claim 16, wherein the distance-measuring section includes a detecting section which detects a contrast of the pair of subject image signals acquired via the optical system for distance measurement (*Col 20 Lines 7-10*), a determining section which repeats the projection by the projecting section while controlling the focusing by the first focusing control section (*Col 20 Lines 13-15 describe a judging or determining system)*, when the subject distance obtained by the distance-measuring section is shorter than a predetermined value and when the contrast obtained by the detecting section is larger than the predetermined value. (*Col 20 Lines 35-36 describe the defocus, which can include aspects such as the distance measurement and contrast, having a predetermined value, which acts as a limit*)

Regarding Claim 20, Nakata teaches the camera according to claim 16, wherein the distance-measuring section includes a detecting section which detects a contrast of the pair of subject image signals acquired via the optical system for distance measurement (*Col 20 Lines 7-10*). The camera including the focusing apparatus further comprising: a third focusing control section which controls the focusing of the photographing lens based on an amount of a reflected light of the light projected onto the subject by the projecting section (previously addressed), when the contrast detected by the detecting section is smaller than a predetermined value. (*Col 20 Lines 35-36 describe the defocus, which can include aspects such as contrast, having a predetermined value, which acts as a limit*)

Regarding Claim 23, Nakata teaches the camera according to claim 22, the control section controls the irradiation of the subject with the auxiliary light by the flash section and controls the focusing by the contrast type focusing section (previously addressed, when the distance of the subject measured by the distance-measuring section is shorter than a predetermined value at the time of the irradiation with the auxiliary light by the flash section, and the contrast of the plurality of subject image signals acquired by the distance-measuring section is larger than a predetermined value. (*Col 20 Lines 35-36 describe the defocus, which can include aspects such as contrast, having a predetermined value, which acts as a limit*).

Regarding Claim 29, Nakata teaches a camera including a focusing apparatus, comprising: a photographing lens; a first auto-focus section which includes an image pickup device to obtain a contrast of a subject image signal obtained via the photographing lens and which adjusts a focus of the photographing lens based on the contrast of the subject image signal obtained by the image pickup device; a pair of optical systems which are different from the photographing lens; a second auto-focus section which includes a distance-measuring device to perform a distance-measuring operation based on a pair of subject image signals obtained via the pair of optical systems and which adjusts the focus of the photographing lens in accordance with the output of the distance-measuring device (*as previously addressed*); a detecting section which detects the subject image signal obtained by the image pickup device or a brightness distribution of the pair of subject image signals obtained by the distance-measuring device (*Col 8 Lines 36-37 describe the multifocus detection sensor unit*

which detects the subject image signal); Nakata teaches changing an aperture value of the diaphragm mechanism in the photographing lens and a sensitivity of the image pickup device (*Col 7 Lines 64-67 through Col 8 Lines 1-4 describe changing the diaphragm and other parameters*). Nakata fails to teach specifically a change section, which selects the second auto-focus section in accordance with a ratio of a low-brightness portion of a brightness distribution detected by the detecting section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a flash device with the invention in Nakata and cause a change section to use the flash device under low brightness conditions.

6. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakata (US 6987538), and further in view of Hamano (US 5771123).

Regarding Claim 31, Nakata teaches the limitations in Claim 31 (as previously addressed) but fails to teach a zoom optical system where the zoom position detecting section detects the position of the zoom optical system. Hamano teaches a zoom optical system (Col 2 Line 24) and includes a system to detect the position or angle of the zoom lens (Col 4 Lines 63-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the apparatus taught by Nakata with the feature of a zoom optical system, to provide a user the ability to take pictures from a further distance.

Regarding Claim 32, Nakata teaches the camera according to claim 31, but fails to teach selecting the first focusing control section when the position of the zoom

optical system detected by the zoom position detecting section is on the side of a wide angle and a brightness change of the subject image signal acquired by the image pickup section is small. Hamano teaches a system that detects a zoom position or position of the zoom lens (Col 4 Lines 63-64) where the wide angle end of the zoom lens is one possible position (abstract Line 10-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize the system by Nakata and modify it by adding the commonly known feature of a zoom lens and detecting a certain position, on the side of a wide angle, and once this is detected to then carry out the features taught by Nakata such as activating the focus control.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure includes Kobayashi (US 7071986), Horie (US 6181378), and Hasegawa (5900927).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Hsu whose telephone number is 571-270-3012. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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